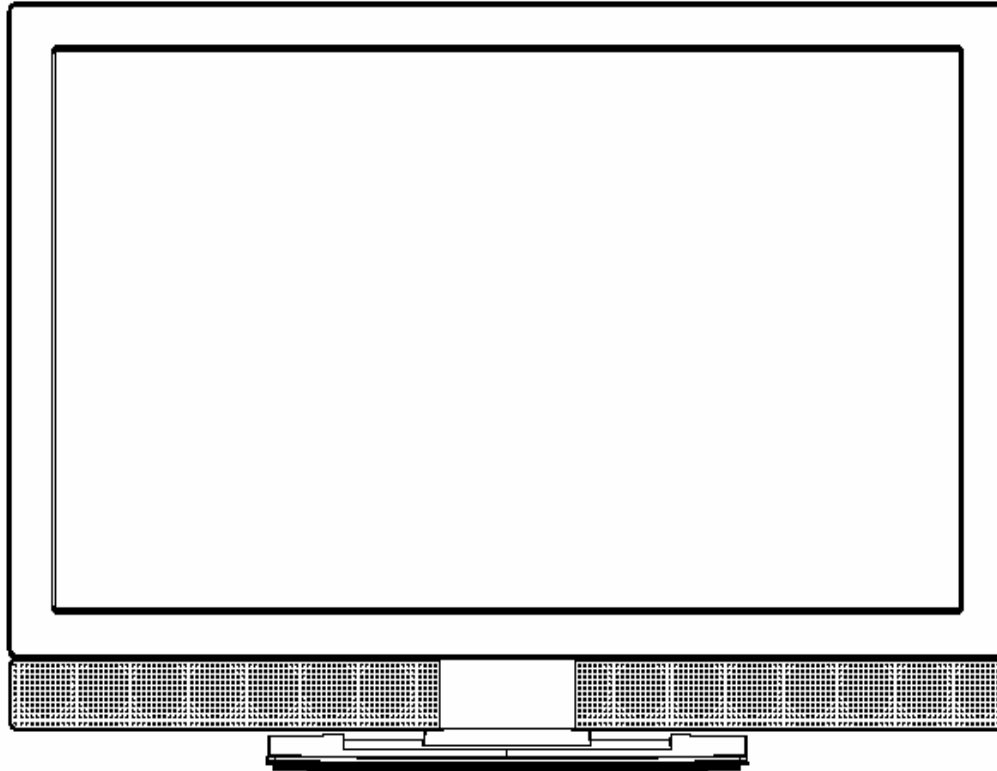


Service Manual



**Model #: VIZIO GV46L HDTV
VIZIO GV46L HDTV10A
(For Samsung Panel)**

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Top Confidential

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Appendix

1. Main Board Circuit Diagram
2. Main Board PCB Layout
3. Assembly Explosion Drawing

Block Diagram

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FCC INFORMATION

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause unacceptable interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures -- reorient or relocate the receiving antenna; increase the separation between equipment and receiver; or connect the into an outlet on a circuit different from that to which the receiver is connected.

FCC WARNING

To assure continued FCC compliance, the user must use a grounded power supply cord and the provided shielded video interface cable with bonded ferrite cores. Also, any unauthorized changes or modifications to Amtrak products will void the user's authority to operate this device. Thus VINC Will not be held responsible for the product and its safety.

CE CERTIFICATION

This device complies with the requirements of the EEC directive 89/336/EEC with regard to "Electromagnetic compatibility."

SAFETY CAUTION

Use a power cable that is properly grounded. Always use the AC cords as follows – USA (UL); Canada (CSA); Germany (VDE); Switzerland (SEV); Britain (BASEC/BS); Japan (Electric Appliance Control Act); or an AC cord that meets the local safety standards.

Chapter 1 Features

- High resolution 1366 x 768 with wide screen
- Built-in digital HDTV and standard TV combination TV tuner
- All TV formats supported (1080i, 720p, 480 p and 480i)
- Computer Monitor (RGB): up to 1366 x 768 (H x V)
- Wall mounting capable with and without speakers
- 2.1 virtual surround sound (TruSurround XT) with 20W subwoofer
- Dual HDMI (High Definition Multimedia Interface)
- Independent Red, Green and Blue adjustment in TV, Video, HDMI and VGA for user fine tuning of color temperature with reset.
- Zero Bright Pixel
- PIP, POP, CC, V-Chip, 3D Comb Filter, Zoom, Freeze, DCDi De-Interlace, 3:2 or 2:2 Reverse Pull-down, ATSC, with 8VSB & QAM demodulation, with MPEG-2 decoding, NTSC Video decoding via RF (Antenna, Cable or Satellite) or Video (CVBS, S-Video or Component), Progressive Scan Video via Component YPbPr, VGA or HDMI, HDTV via HDMI or Component YPbPr,

Chapter 2 Specification

1. General specification

Native Resolution	1366 (H)X768 (V) pixels,
Effective Display Size	1018.353 (H) x 572.544 (V) mm
Aspect Ratio	16:9
Display Color	8 bit, 16.7M
Brightness	400 cd/ m ² (Min)
Contrast Ratio	1,200:1 (Typical, panel spec).
TV system	NTSC/ATSC/ QAM
PC Inputs	15pins D-sub, HDMI-DVI
Video Inputs	2 x S-Video 2 x AV inputs (CVBS; RCA type) 2 x Component (Y Pb/Pr Cb/Cr) 2 x HDMI
Audio Inputs	6 x Stereo RCA (R/L), 1 x PC Mini-Jack
Audio Outputs	Analog - 1 x stereo RCA (R/L) 1 x headphone Digital – 1 x SPDIF Optical
Audio	10W8Ω X 2 + 20W8Ω X 1
Power Input	100 to 240 Vac
Power Consumption	320W Max

2. Optical characteristics

Item	Specification			Note
Display Pixels	1366 (H) x 768 (V) pixels			
Pixel Pitch	0.7455 (H) x 0.2485 (V) mm*3			
Pixel Arrangement	RGB vertical stripe			
Color Depth	8 bit, 16.7M colors			
Active Display Area	921.6 (H) x 519.2 (V) ± 0.5 mm			
Surface treatment of Hard coating	3H			
Brightness	400 cd/m ² (min)			
Contrast ratio (panel spec)	1,200:1 (Typical, dark room)			
Color coordinates	Cool (9300K):: x=0.283 \pm 0.03, y=0.297 \pm 0.03			RGB
	Standard (6500K): x=0.313 \pm 0.03, y=0.329 \pm 0.03			RGB /VIDEO
	Warm (5400K): x=0.332 \pm 0.03, y=0.348 \pm 0.03			RGB
	User: x= 0.280 \pm 0.03, y= 0.290 \pm 0.03			RGB
Viewing angle	Hor.	ϕ L	≥ 75	
		ϕ R	≥ 75	
	Ver.	ϕ U	≥ 75	
		ϕ D	≥ 75	

3. Power Supply

- | | |
|----------------------|--------------------------------|
| a. Input voltage | 100-240Vac, 50/60Hz |
| b. Input current | 3.2A or less (at AC 100V/60Hz) |
| c. Inrush current | 60A at Vac=120V |
| d. Power consumption | 320 W Max |
| e. Standby/Power-off | 3 watts max. (at 120 Vac) |

4. Environment

4.1 Operating

- a. Temperature 0~35°C
- b. Humidity 0%~90% RH (No condensation)

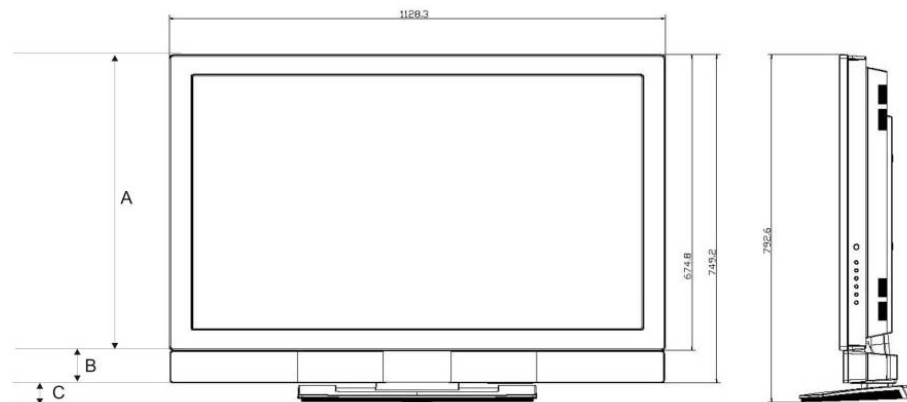
4.2 Non-operating

- a. Temperature -20~60°C
- b. Humidity 0%~90% RH (No condensation)

4.3 Altitude

- a. Operating 0~14,000 ft
- b. Non-operating 0~40,000 ft

5. Dimensions & Weight



A: Display Module

B: Speaker

C: Base

	Display Module	Display Module + Speaker	Display Module + speaker + Base
a. Height	674.8 mm	749.2 mm	792.6 mm
b. Width	1128.3 mm	1128.3 mm	1128.3 mm
c. Depth	120.9 mm	132.9 mm	269.3 mm
d. Net weight	30.8+/- 0.5 kgs	33.50+/- 0.5 kgs	37.00 +/- 0.5 kgs
e. Gross Weight	--	--	44 +/- 1 kgs

6. Packaging Specification

6.1 Packaged dimensions

a. Height	960+/- 20 mm
b. Width	1300+/- 20mm
c. Depth	374 +/- 20 mm

6.2 Pallet Load

a. Sea	3 units/pallet
--------	----------------

6.3 Container Load

a. 40' container	108 units (@3 x 36 pallets= 108 units)
b. 20' container	48 units (@3 x 16 pallets= 48 units)

Chapter 3 On Screen Display

1. Analog Menu - RGB/AV/Component/HDMI/TV

Image Settings

Mode	Level 1	Level 2	Level 3	Level 4
VIDEO	Picture Mode	Vivid, Movie, Game, Sport, Custom		
VIDEO	Brightness(0~100)			
VIDEO	Contrast(0~100)			
VIDEO	Saturation(0~100)			
VIDEO	Hue(-50~50)			
VIDEO	Sharpness(0~24)			
VIDEO	Advanced			
VIDEO		Noise Reduction		
VIDEO			Motion(0~16)	
VIDEO			Digital(0~64)	
VIDEO		Fleshtone	Off, High, Medium, Low	
VIDEO		Dynamic Contrast (0,1,2,3)		
VIDEO		Backlight (High, Medium, Low)		
VIDEO	Custom Color*			
VIDEO		Red(0~100)		
VIDEO		Green(0~100)		
VIDEO		Blue(0~100)		
PC		Auto Adjustment		
PC		Image Position		
PC		Phase		
PC		Clocks/Line		
PC		Color Temp		
PC			Warm(5400K)	
PC			Standard(6500K)	
PC			Cool(9300K)	
PC			User	
PC				Red(0~100)
PC				Green(0~100)
PC				Blue(0~100)
PC		Backlight (High, Medium, Low)		

When “Custom” in “Picture Mode” is selected.

Display Settings

Mode	Level 1	Level 2	Level 3	Level 4
VIDEO	Aspect Ratio	16:9 、 4:3 、 Zoom* 、 Panoramic**		
PC	Aspect Ratio	16:9 、 4:3		
	PIP			
		PIP Mode	Off, Large PIP, Small PIP, POP	
		PIP Position	Top-Left, Top-Right, Bottom-Left, Bottom-Right	
		PIP Input ***		

* RGB doesn't support Zoom function

** Only AV and Component 480i/480p support Panoramic function.

*** Please see 4.3 “PIP/POP Table” for PIP/POP matrix for all inputs.

Audio Settings

Mode	Level 1	Level 2	Level 3	Level 4
	Bass(0~20)			
	Treble(0~20)			
	Balance(-10~10)			
	SRS TS XT* (On, Off)			
	Auto Volume(On, Off)			
	Speakers(On, Off)			
	Audio Out**	Fixed Volume, Variable Volume		

* SRS TS XT doesn't support DTV/TV and line out.

** When “Speakers” is off

Parental Controls

Mode	Level 1	Level 2	Level 3	Level 4
VIDEO	Password			
VIDEO		Settings		
VIDEO			TV Rating	
VIDEO				TV Youth (Unblocked 、Blocked)
VIDEO				TV Youth 7 (Unblocked 、Blocked)
VIDEO				TV G (Unblocked 、Blocked)
VIDEO				TV PG (Unblocked 、Blocked)
VIDEO				TV 14 (Unblocked 、Blocked)
VIDEO				TV MA (Unblocked 、Blocked)
VIDEO				Unblocked
VIDEO			Movie Rating	
VIDEO				Movie G (Unblocked 、Blocked)
VIDEO				Movie PG(Unblocked 、Blocked)
VIDEO				Movie PG-13(Unblocked 、Blocked)
VIDEO				Movie R(Unblocked 、Blocked)
VIDEO				Movie NC-17(Unblocked 、Blocked)
VIDEO				Movie X(Unblocked 、Blocked)
VIDEO				Unblocked
VIDEO			Block Unrated (No, Yes)	
VIDEO		Change Password		
VIDEO			Please enter new password	
VIDEO			Please re-enter new password	
VIDEO		Clear All (No, Yes)		

Setup

Mode	Level 1	Level 2	Level 3	Level 4
	Closed Caption			
		Display	CC1, CC2, CC3, CC4, TEXT1, TEXT2, TEXT3, TEXT4	
		Captions on mute	On, Off	
	Language	English, French, Spanish		
	Factory Reset (No,Yes)			
	Image Cleaner			
TV	TV Menu			
TV		Auto Scan		
TV		Set Channel	Add/Skip	
TV		Cable/Antenna		
DTV	DTV Menu*			
	Firmware Version			

* DTV menu is followed by options in the following point 2 when it is selected.

2. DTV Menu

Level 1	Level 2	Level 3	Level 4	Level 5
DTV Tuner Setup				
	Time Zone			
		Hawaii		
		Eastern Time		
		Indiana		
		Central Time		
		Mountain Time		
		Arizona		
		Pacific Time		
		Alaska		
	Cable/Air/Auto			

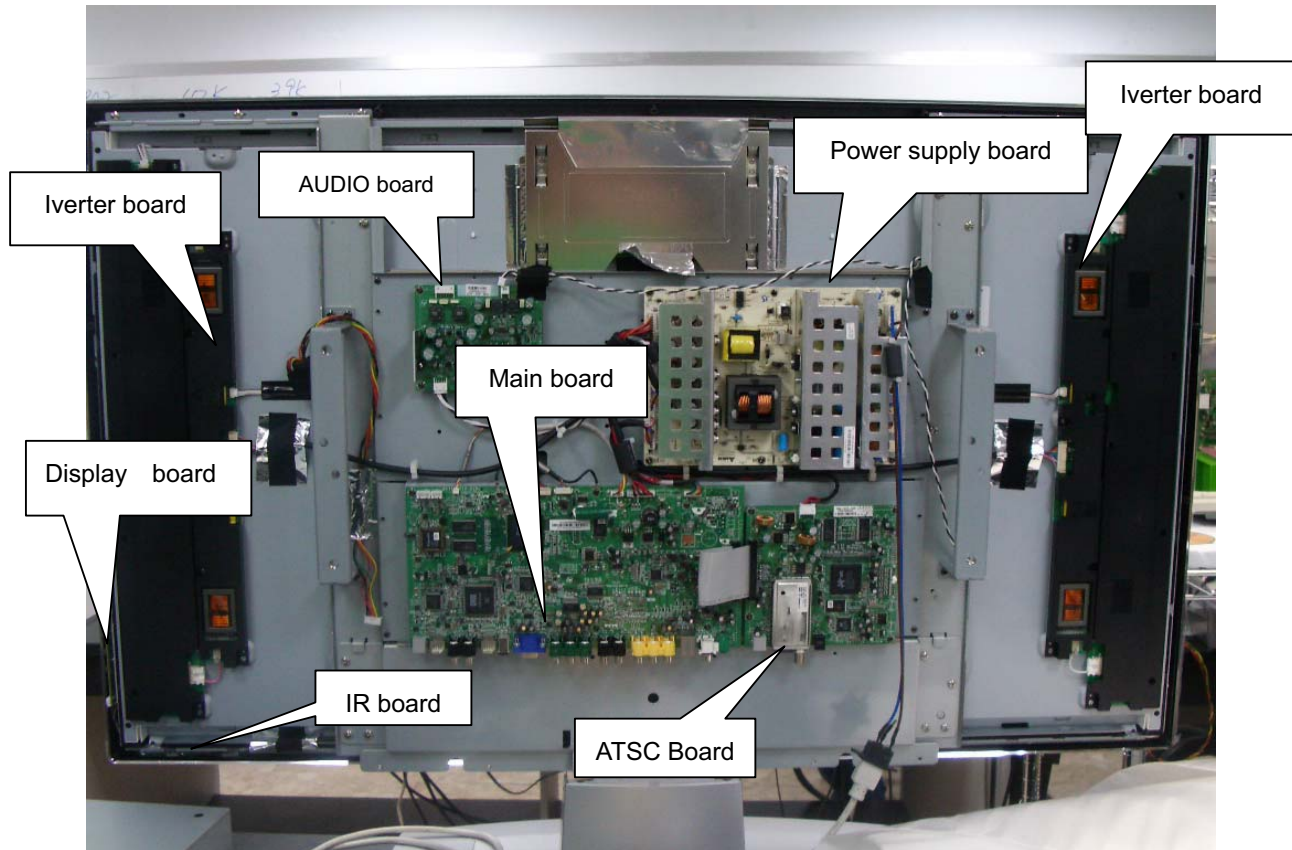
Level 1	Level 2	Level 3	Level 4	Level 5
	Scan*			
	Manual Scan*			
		Scan mode		
			Add-on Mode	
			Range Mode	
				From Channel
				To Channel
	Channel Skip			
	Digital Audio Out			
		PCM		
		OFF		
		Dolby Digital		
Closed Caption				
	Analog Closed Caption	CC1~CC4、 OFF		
	Digital Closed CAPTION	Service 1~Service 6, OFF		
	Digital Closed Style			
		As Broadcaster		
		Custom		
			Font Size	
				Large
				Small
				Medium
			Font Color	
				Black
				White
				Green
				Blue
				Red
				Cyan
				Yellow
				Magenta
			Font Opacity	
				Solid
				Translucent
				Transparent

Level 1	Level 2	Level 3	Level 4	Level 5
			Background Color	
				Black
				White
				Green
				Blue
				Red
				Cyan
				Yellow
				Magenta
			Background Opacity	
				Solid
				Translucent
				Transparent
			Window Color	
				Black
				White
				Green
				Blue
				Red
				Cyan
				Yellow
				Magenta
			Window Opacity	
				Solid
				Translucent
				Transparent

Parental control

Chapter 10 Trouble Shooting

A. SYSTEM OVERVIEW

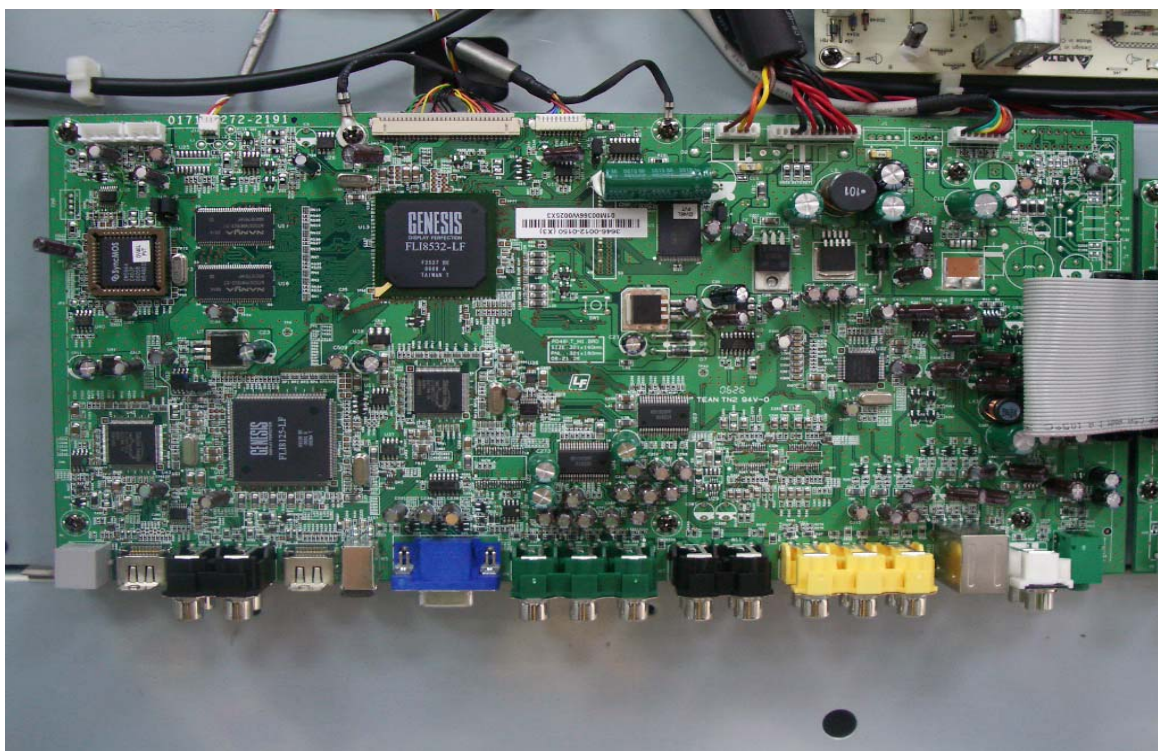


B. PCB PARTS NAME/NUMBER AND FUNCTION DESCRIPTION

PART NAME	PART NUMBER	FUNCTION DESCRIPTION
POWER SUPPLY BOARD		PROVIDE ALL THE POWER FOR TV SET
MAIN BOARD	364600120150	CONNECTING TO TRANSFER DISPLY SIGNAL TO PDP SET, AMPLIFIER THE AUDIO SIGNAL TO THE SPEAKER
IR BOARD	364600120189	RECEIVE THE REMOTE CONTROLER AND DISPLAY SYSTEM STATUS LED
DISPLAY BOARD	364600120156	KEYPAD FUNCTION FOR MANUAL OPERATE TV
ATSC BOARD	364600120190	DTV/TV MODLE
AUDIO BOARD	364600120137	

C. BOARD PICTURE

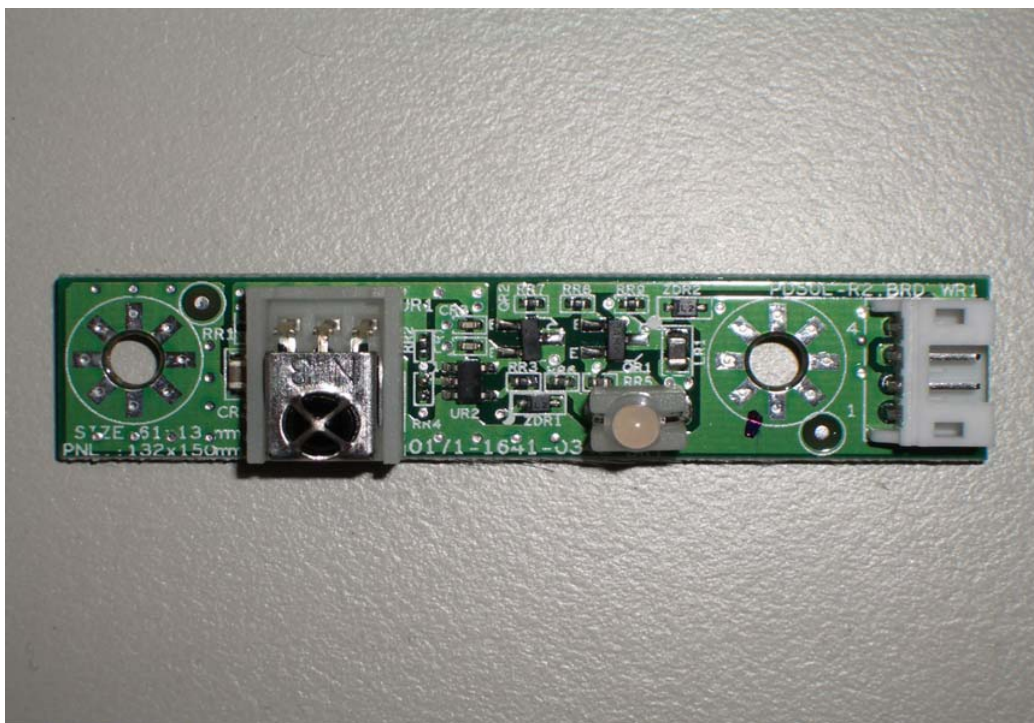
MAIN BOARD



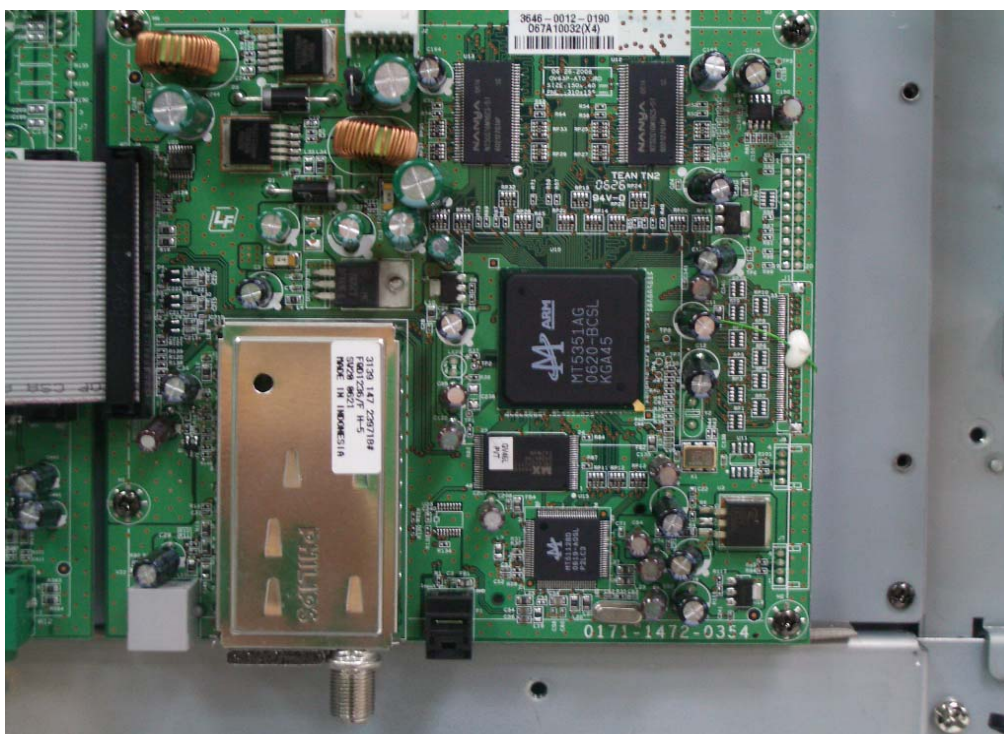
DISPLAY BOARD



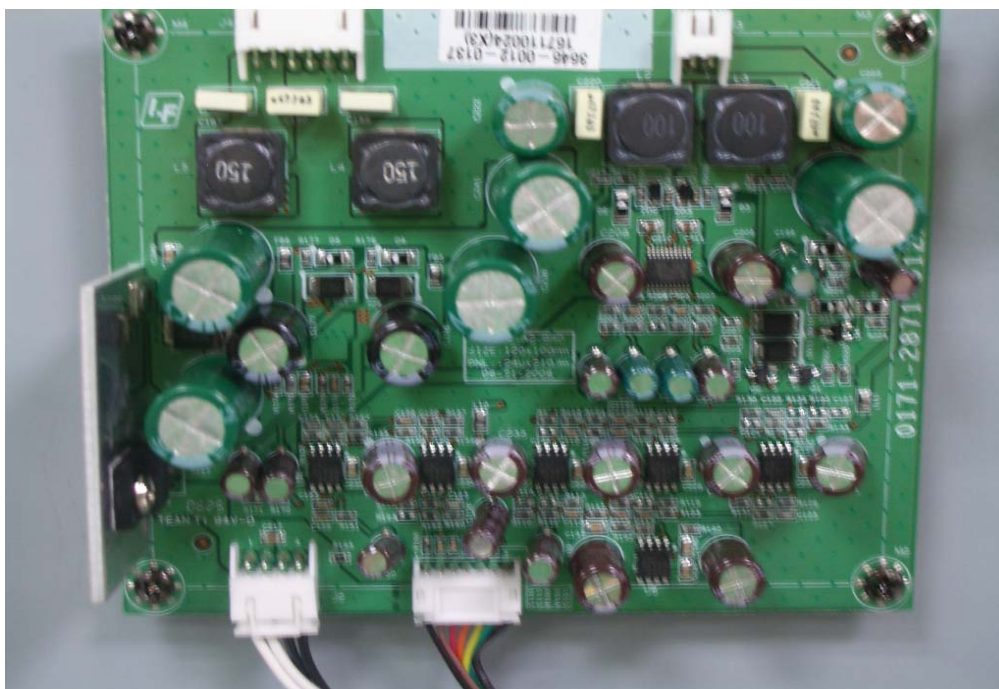
IR BOARD



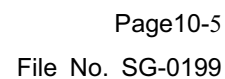
ATSC BOARD



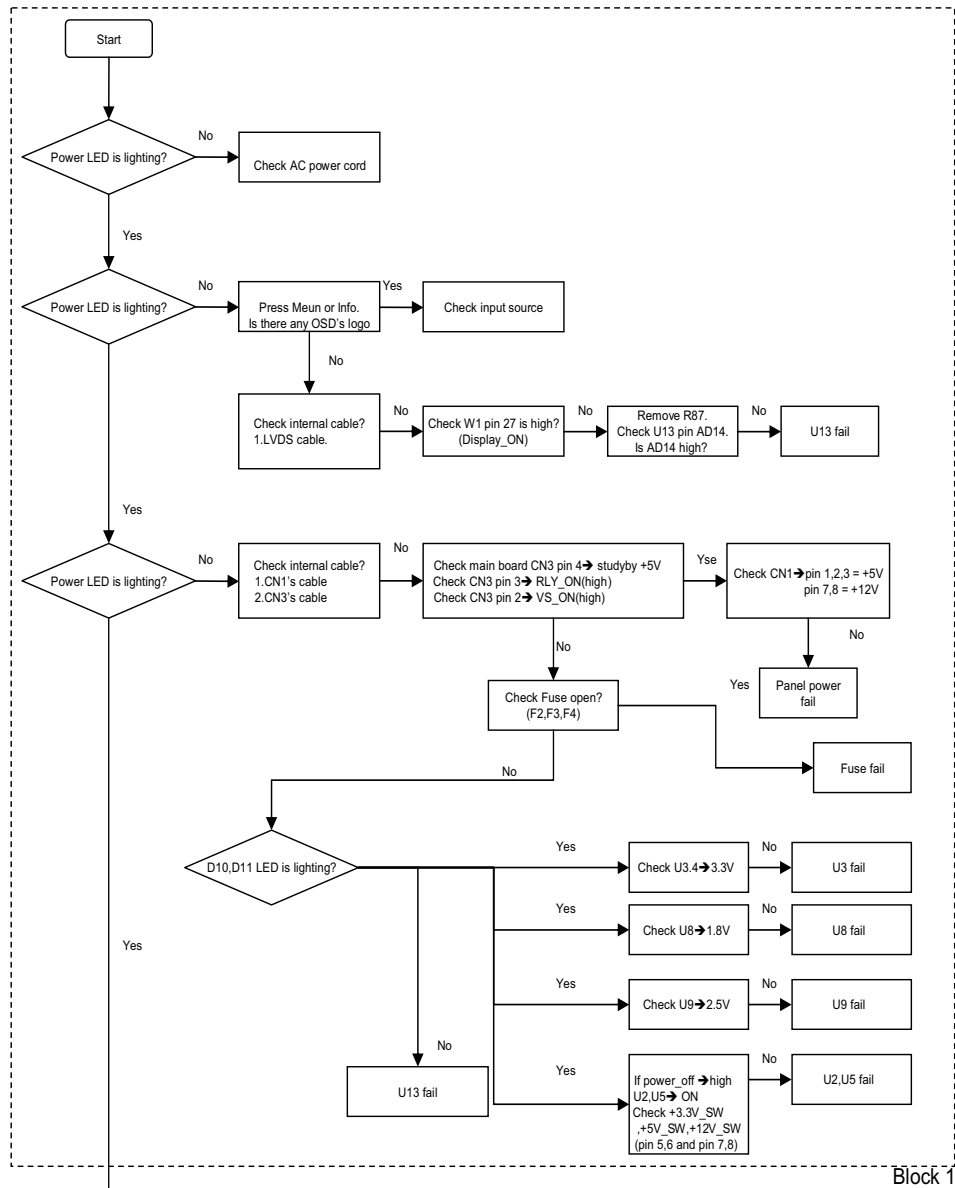
AUDIO BOARD



1. Main board & ATSC board block diagram

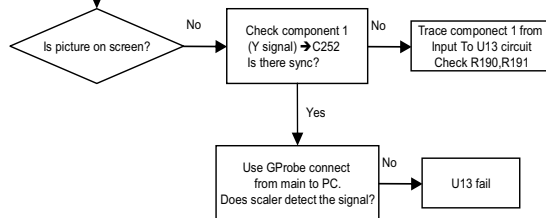


LCD DISPLAY NOTHING(Analog HD1/AC on/off default)



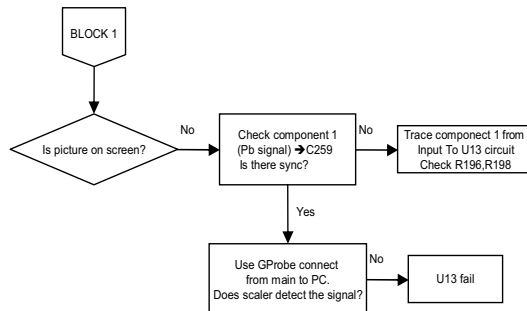
Block 1

LCD DISPLAY NOTHING(Analog HD1 without Y signal)

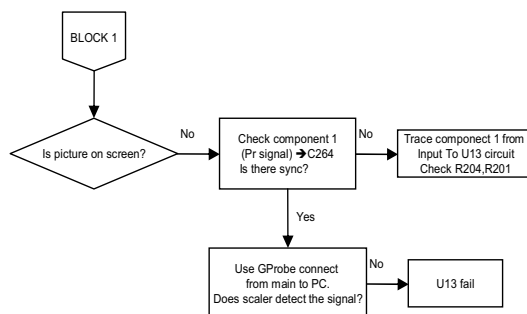


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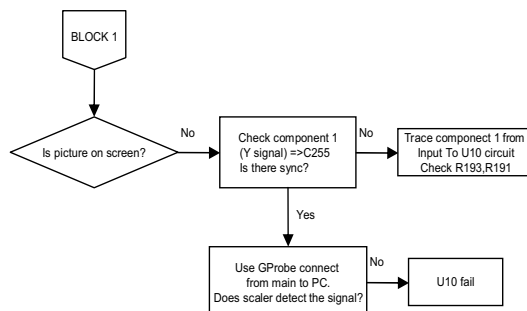
LCD DISPLAY NOTHING(Analog HD1 without Pb signal)



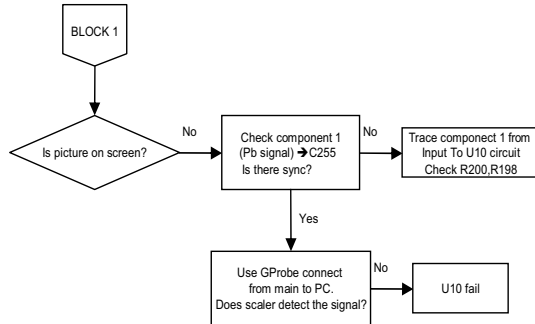
LCD DISPLAY NOTHING(Analog HD1 without Pr signal)



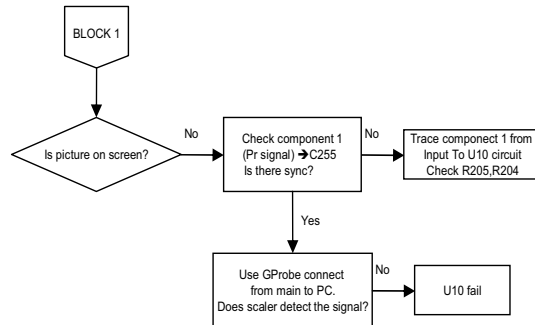
LCD DISPLAY NOTHING(Analog HD1 on PIP mode without Y signal)



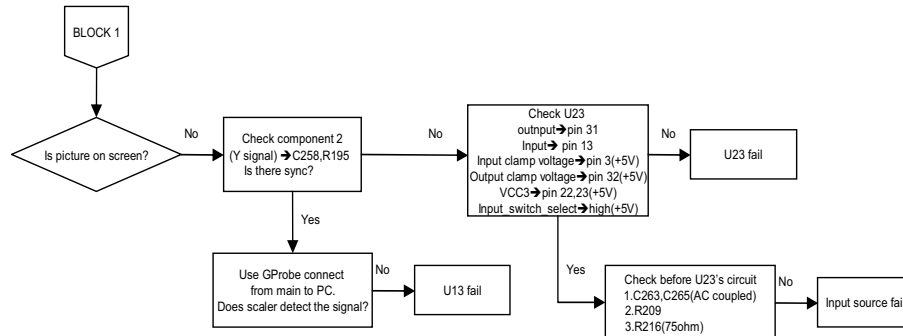
LCD DISPLAY NOTHING(Analog HD1 on PIP mode without Pb signal)



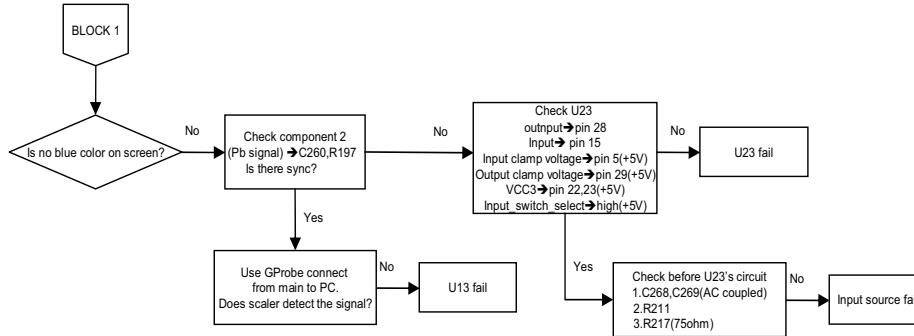
LCDDISPLAY NOTHING(Analog HD1 on PIP mode without Pr signal)



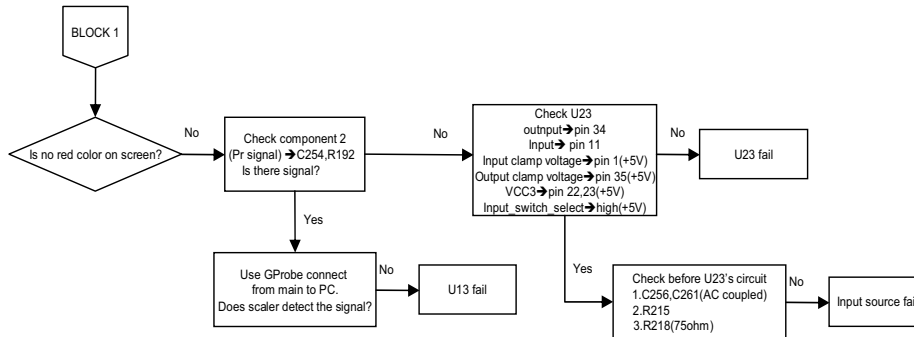
LCD DISPLAY NOTHING(Analog HD2 without Y signal)



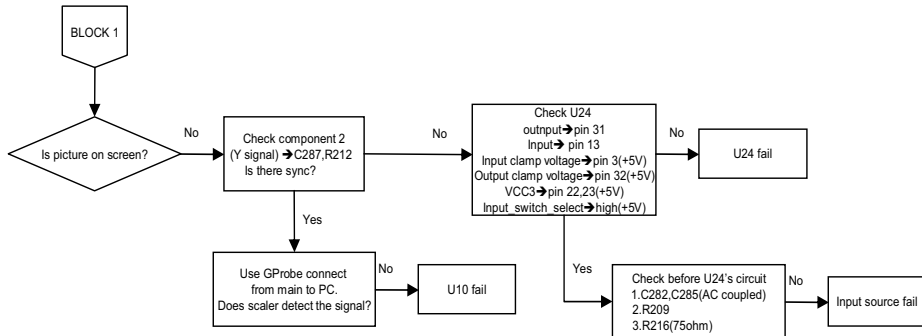
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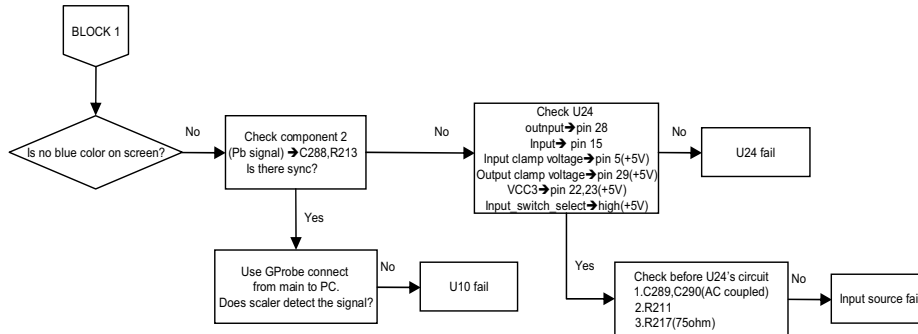
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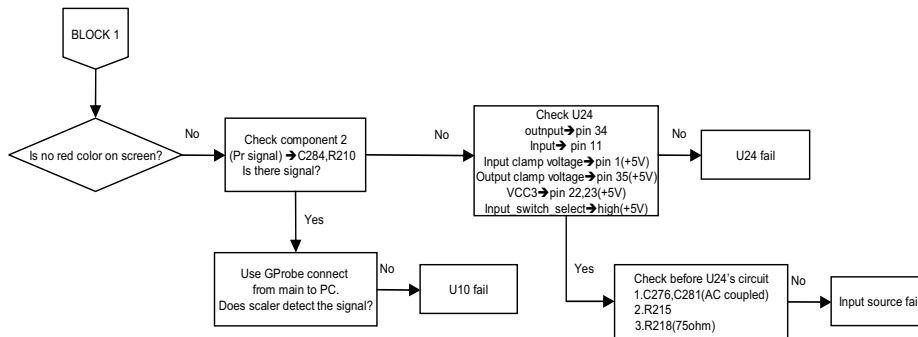
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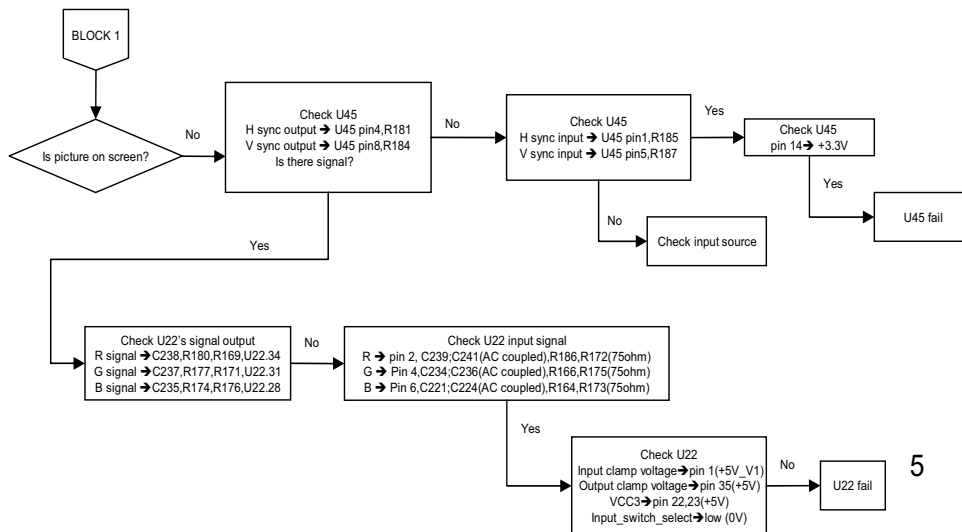
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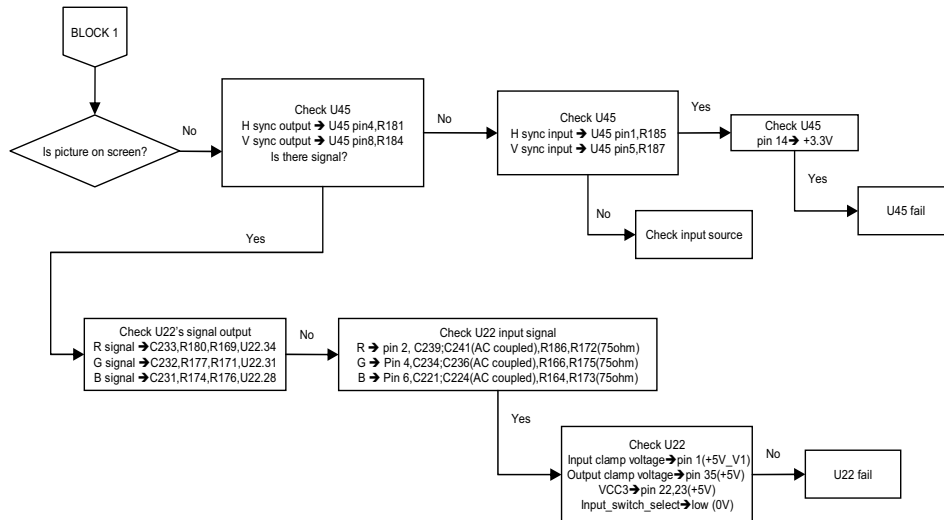
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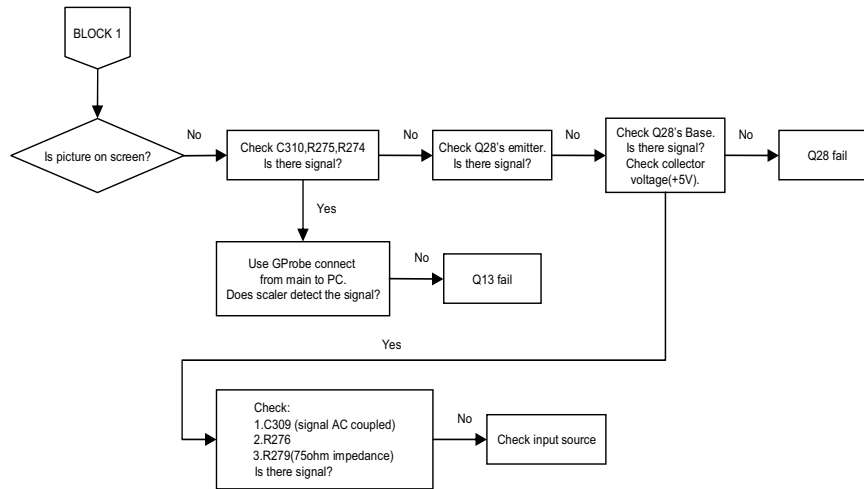
LCD DISPLAY NOTHING(RGB)



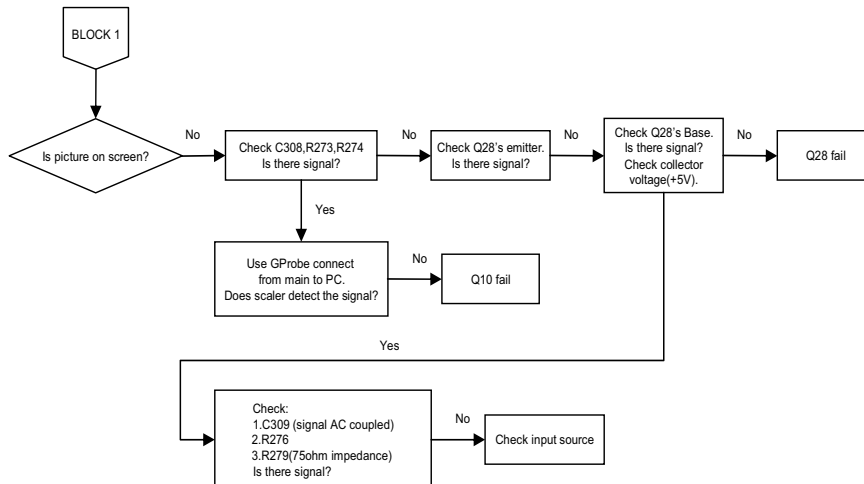
LCD DISPLAY NOTHING(RGB on PIP mode without screen)



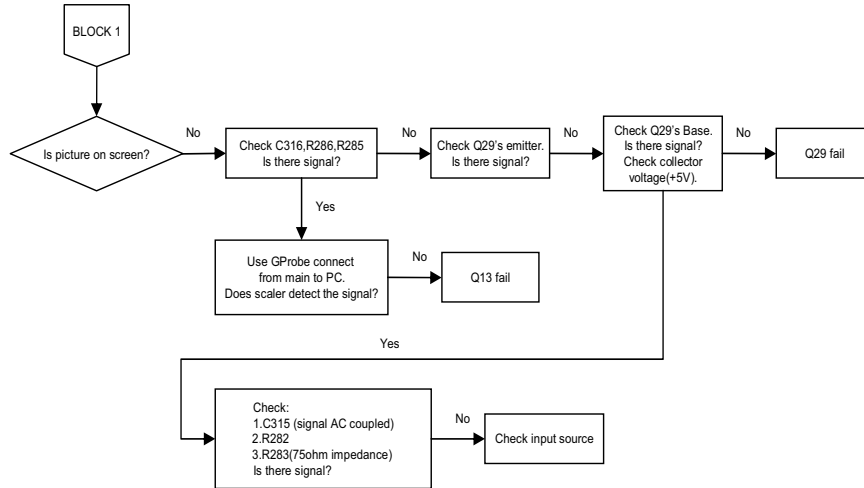
LCD DISPLAY NOTHING(Composite 1 without screen)



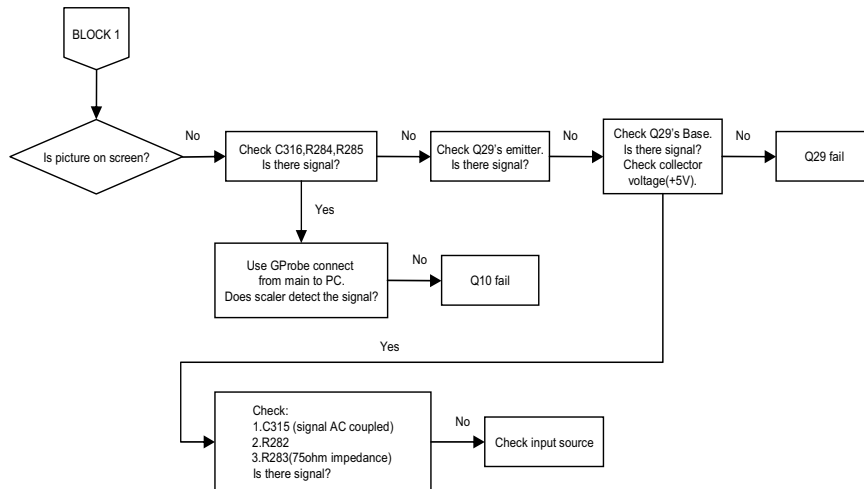
LCD DISPLAY NOTHING(Composite 1 on PIP without screen)



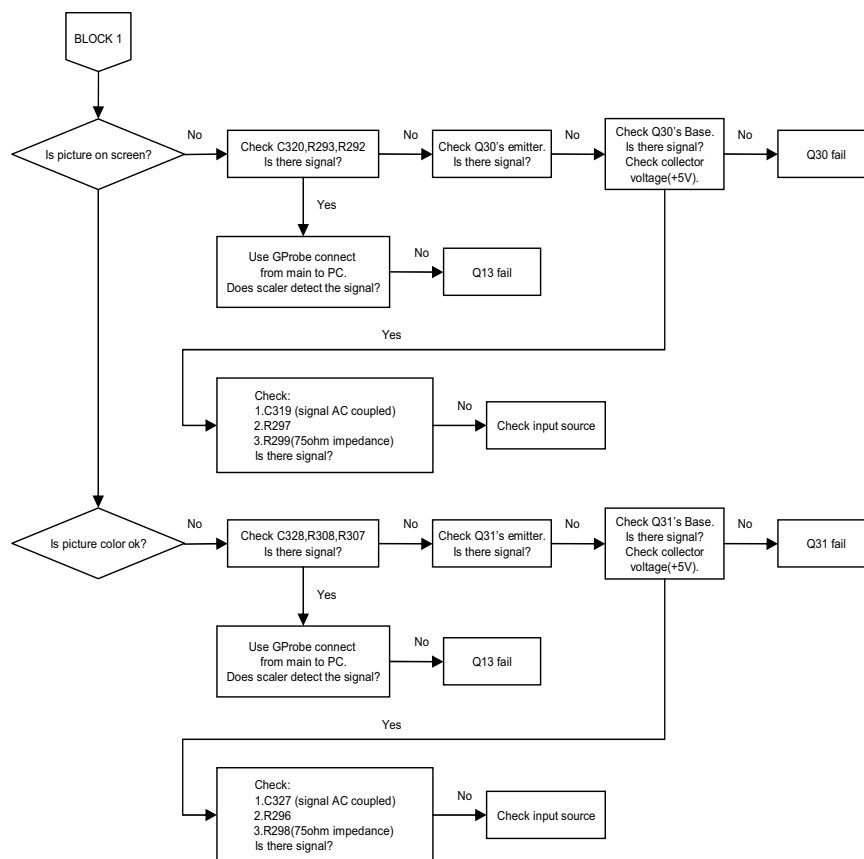
LCD DISPLAY NOTHING(Composite 2 without screen)



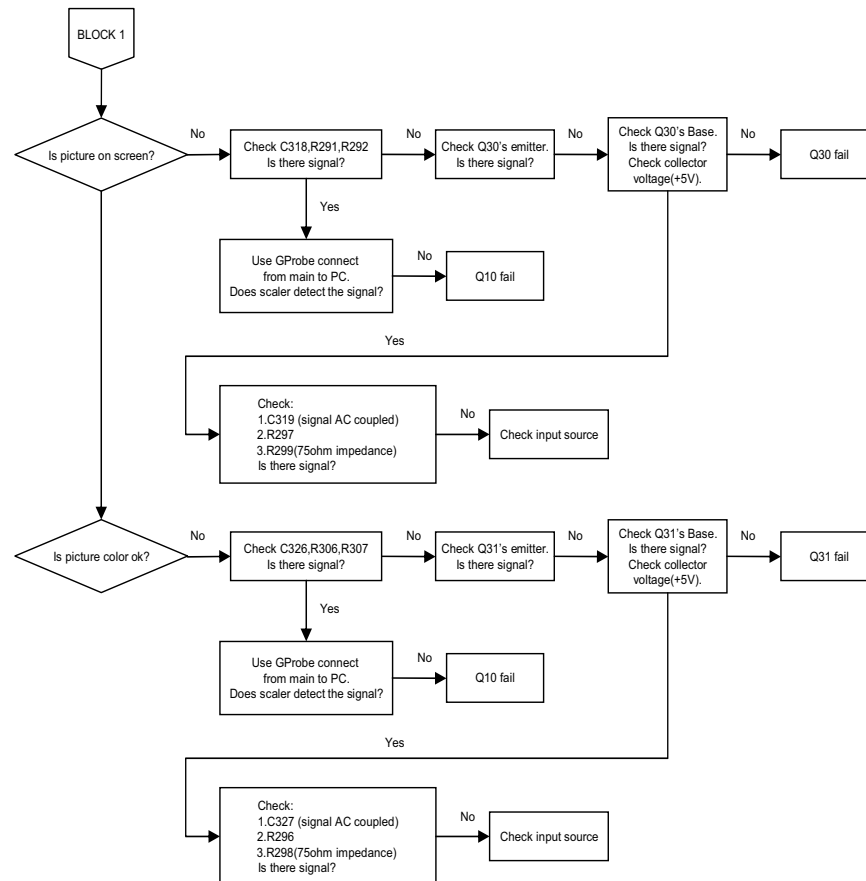
LCD DISPLAY NOTHING(Composite 2 on PIP without screen)



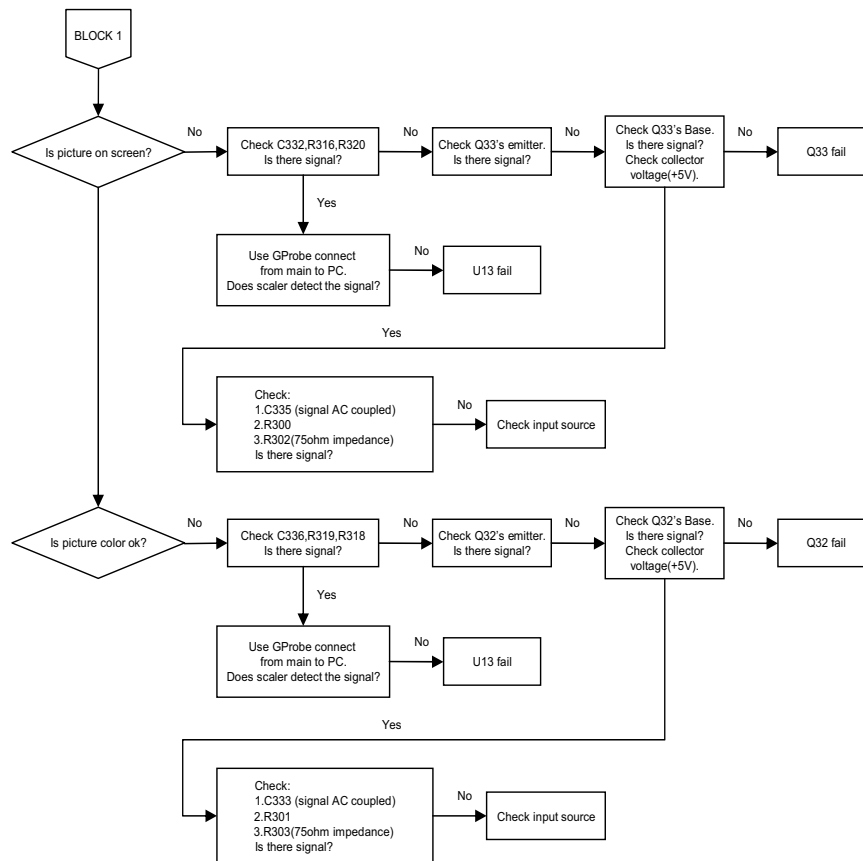
LCD DISPLAY NOTHING(S-VIDEO 1 without screen)



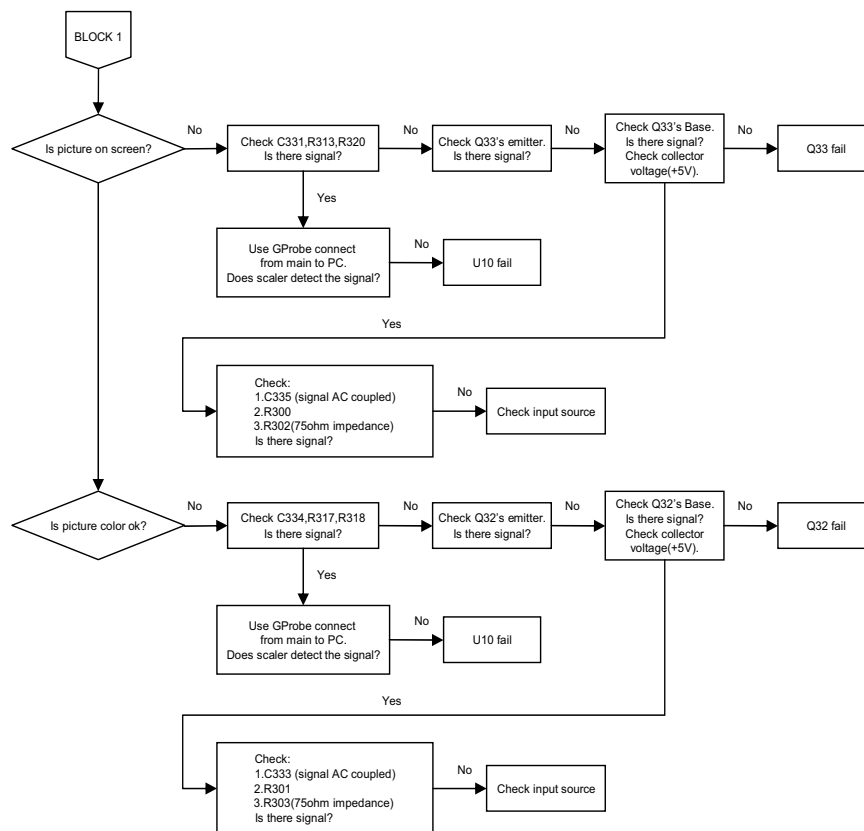
LCDDISPLAY NOTHING(S-VIDEO 1 on PIP mode without screen)



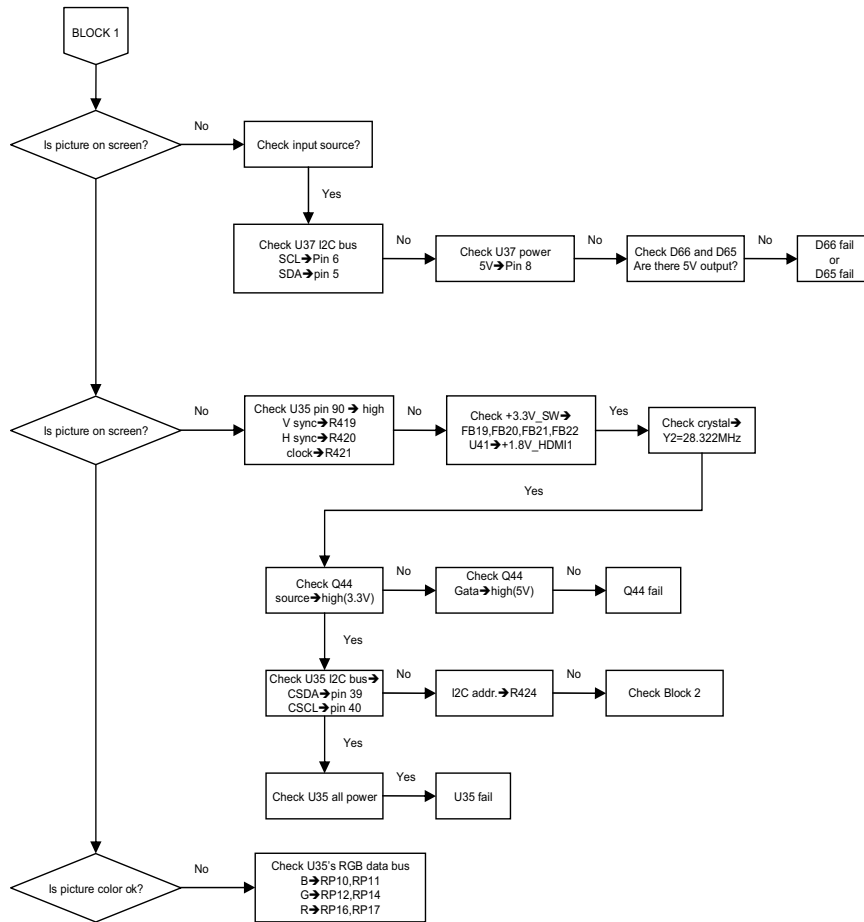
LCD DISPLAY NOTHING(S-VIDEO 2 without screen)



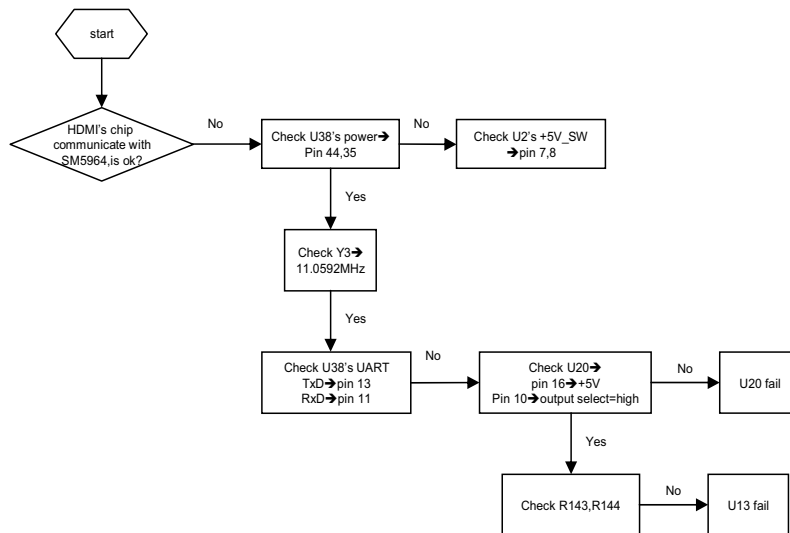
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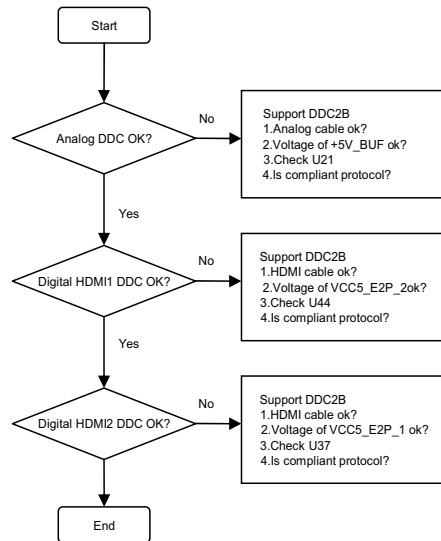
LCD DISPLAY NOTHING(Digital 2 U35 with PORT B without screen)



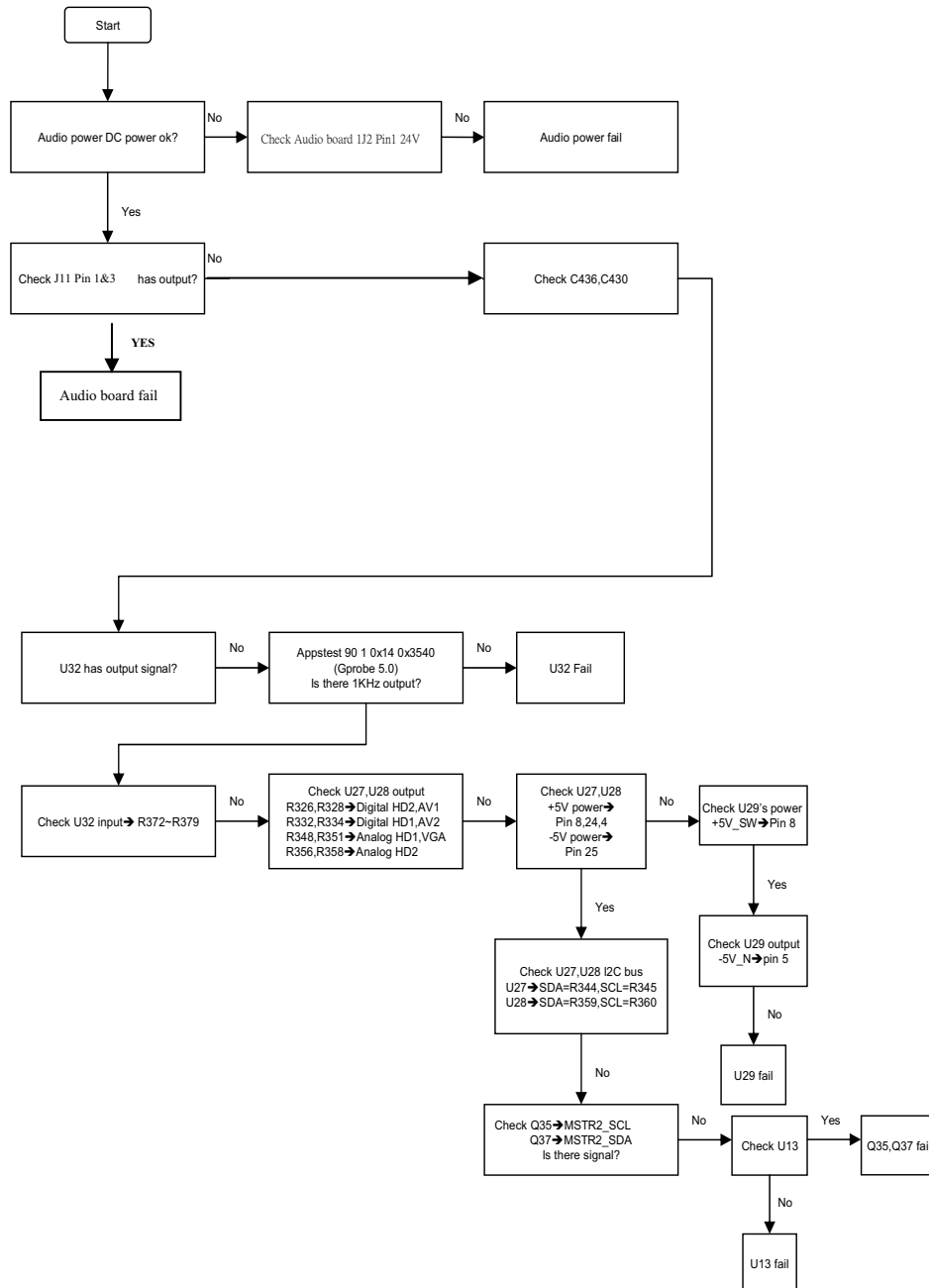
Block 2



TROUBLE OF DDC READING



LCD NO SOUND



TROUBLE OF THE DTV

